

Remarks

Claims 19, 26 and 28 have been amended with the details set forth in Attachment I (Version with Markings to Show Changes Made).

The 35 USC 112 Rejections

Claim 26 is rejected under 35 USC 112, first paragraph, as containing subject matter not described in the specification. Claim 26 has been amended to read "alkali metal oxide" which is described on page 8, lines 25-26 of the specification. Thus, this rejection has been overcome.

Claims 19-30 are rejected under 35 USC 112, second paragraph, as being indefinite. The terms in Claim 19 which were objected to have been overcome by amendment. A copy of the sections of the book by Fomenko et al, as requested, is enclosed. The objection to Claim 28 has been overcome by amendment thereto. Thus, this ground of rejection has been overcome.

Claims 19-30 are rejected under 35 USC 112, first paragraph, as there is no disclosure to support the terms in Claim 26. The Examiner's attention is directed to page 8, lines 25-26 which provides clear support for the subject matter of Claim 26. As to Claim 19, attention is directed to the component 23 which functions as a heating/cooling device. Thus, it is submitted that this ground of rejection has been overcome.

The 35 USC 103 Rejections

Claims 19, 21-22, 24-27 and 29-30 are rejected under 35 USC 103(a) as being unpatentable over Russo in view of Chrisey, and further in view of Face, Koga, Gartner or Mehrotra. If one cites enough references against a claim, there is always a chance that one of the references might teach a feature claimed. Aren't five(5) ternary references a little overkill? Here, the Examiner has merely picked components from the six(6) secondary and ternary references in a effort to modify the primary reference. Such picking of components based on an applicant's

teachings is impermissible under 35 USC 103. Where in any of these seven(7) references is there a teaching of "a target containing a material having a work function of approximately 1 eV", or where is there taught in these references "a laser capable of directing photons at or below visible wavelength" onto a target, let alone the specific features of dependent Claims 21, 22, 24-27, and 29-30? Thus, as now amended, these claims clearly define over the applied seven(7) references and this rejection should be withdrawn.

Claims 20 and 28 are rejected under 35 USC 103(a) as unpatentable over the seven(7) references cited against Claim 19, further in view of Moto, Cotell and Face. If the primary reference does teach the invention as claimed, apply an additional nine(9) references in hopes that a teaching therefrom may take. These additional three references, like the originally applied seven(7) references fail to teach the features parent Claim 19. Thus, this ground of rejection should be withdrawn.

Conclusion

In view of the amendments to the claims and the foregoing comments, each rejection has been overcome. Thus, this application is in condition for allowance based on Claims 19-30.

Respectfully submitted,

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Enclosure:
Copy of Fomenko et al

Attachment I
S. N. 09/636,134

Version with Markings to Show Changes Made

In The Claims

Claims 19, 26 and 28, amend to read as follows:

19. (Twice Amended) An apparatus for depositing a material having a [low] work function of approximately 1 eV [material] on a substrate by laser ablation using short-wavelength photons, including:

a deposition chamber,

a target containing a material having a [low] work function [material] of approximately 1 eV in said chamber,

a laser capable of direction [short-wavelength] photons at or below visible wavelength into said chamber and onto said target,

means for rotating said target,

means for controlling the composition of the deposit by controlling at least one of the group consisting of the environment of said deposition chamber, the target composition, and the target temperature.

a substrate located in said chamber,

means for holding said substrate, and

means for at least rotating said substrate.

26. (Amended) The apparatus of Claim 19, wherein said target is composed of barium metal oxide or an alkali metal oxide.

28. (Amended) The apparatus of Claim 19, wherein said means for holding said substrate is rotated at 1 to 10 rpm and tilted at an angle in a range with respect to horizontal of 0 to 90°.